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The Masoretic Chant of the Bible

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The Tradition of the Levites

The Te'amim and their puzzle

INTRODUCTION
The Riddle of the Original Meaning of the Te'amim

I. THE MATERIAL AND ITS PUZZLE

1.1 The material on which this work focuses, the Tiberian Masoretic accents (*te'amim*), is exceptional among the traditional written Jewish sources for the mildness of the variations between the form known to the general public, that of the *ta'amei hamiqra*' in modern printed editions of the Bible, and its most ancient known form, that of the manuscripts of the so-called conventional Tiberian School, produced a millennium ago. Their degree of uniformity is conspicuously high when they are compared with the heterogeneity typically observed, say, in Talmudic or Midrashic materials (Yeivin, 1968, p.376). This is true for both aspects of this corpus: the signs themselves - thirty or so for each of the two subsystems of accents (that of the 21 so-called prose books, and that of Psalms, Proverbs and Job - ta'amei Emet) and their actual occurrence along the biblical text.

1.2 One immediate reason for the remarkable stability of this material stems from the very essence of the Masoretes' tremendous enterprise, i.e., the elaboration of a system that could keep time from eroding the transmission of the biblical corpus. This included not only an exceedingly precise presentation of the textual punctuation - the accentuation and vocalization signs (Coshen-Cottstein, 1963, p.89) but also a most extensive expansion of this presentation in the form of remarks and enumerative lists - the Masorah in its strict sense.

1.3 A second reason for the stability of the *te'amim* system is that all the Diaspora communities, Fast and West, accepted the Tiberian punctuation as binding, often shortly after the Masoretes completed the bulk of their activity (about 10th century C.E.). Ultimately, this system superseded all others, such as the so-called Babylonian, Palestinian, or Tiberian non- conventional systems. Consequently, the transmission of the Tiberian system became an integral part of the general commitment by Jews everywhere to preserve the correct reading of their canonic literature.

1.4 Paradoxically, the graphemes fostered so devotedly by the Diaspora communities meant little to the majority of their custodians in the precise concrete sense. Synchronic studies of present performance of the accents in biblical cantillation, following various Jewish traditions, reveals a mosaic of different interpretations of the signs. There are many factors of variation: the cultural origin of the informant, the biblical passage read, and the traditional occasion of reading, to name only three. One could state that the only rule that emerges clearly in the rendering of the written system, irrespective of any given practice, is one of incompleteness and inconsistency (Herzog 1963, 1972, p. 1100).8 The performance traditions of the *ta'amei Emet* subsystem of accents, when extant, are even more vague than the prose set (Flender, 1992, pp. 71, 137).

1.5 **Diachronic studies, when available, provide substantial evidence complementary to that arising from synchronic studies** that the exact meanings of at least some of the graphemes **were unknown not only in modern times but even in the** very period in which these signs were adopted (Avenary 1976). Thus these studies gave ethnomusicologists some reason to be evasive or even to harbor doubts as to whether the Masoretic accents *ever* conveyed any precise systematic musical meaning (Avenary, 1972, p.585; Herzog, 1972, pp. 1100, 1109).

1.6 Such skeptical views could muster additional support from a fact of cardinal importance: the so-called divisional function of the *te'amim.* This is the remarkable property, discovered by seventeenth-century scholars and thoroughly studied since then, of systematic correspondence between the series of accents and the syntactic structures of any given verse. This established the *te'amim* (especially those referred to as disjunctive) as a powerful system of punctuation marks that delimit different syntactic units. In view of this abstract logical regularity, some accentologists did not hesitate to deny any musical concreteness to the original meaning of these signs (Bohlius, 1636). Others came to accord it only a very secondary rank, far behind its main function. This function was perceived either as hermeneutic - to clarify the exegetical division of the text (Ackermann, 1893) or rhetoric - to

express the correct reading of the spoken sentence (Spannier, 1927). In such a context, it does not seem farfetched to interpret the results of field observations and historical musicology in a similar vein.

1.7 **Yet these doubts about the fundamental musical character of the Masoretic accents clash with other observations, no** less central, in the field of Masoretic studies. Even though many rules of *te'amim* occurrence can be linked to the syntactic function, detailed examination shows that this in itself cannot account for the richness and complexity of the total system of rules. If the *te'amim* were just a system of punctuation marks, it would be just as effective with one-sixth the number of accents (Breuer, 1982, pp. 14, 20) and could do without a great many rules that depend on minute word-morphological details *(ibid.,* pp. 22, 26).

1.8 **One could propose that the set of accents has undergone some process of hypertrophy** similar to that which befell the Byzantine or Syriac accentuation Systems; if so, the complexity of the *te'amim* would reflect nothing but abstract ramifications in mental analysis (Avenary, 1963, p. 10).

1.9 However, this **possibility seems quite unlikely in view of the broader perspective, introduced by modem Masoretic studies,** on our understanding of the nature of the Masoretes' activity. Contemporary scholars have stepped back from Kahie's (1959) theory which, briefly put, asserted that the Tiberian Bible actually expresses "no true tradition at all" (Coshen-Cottstein, 1963, p. 20), and admit today that the essence of the Masoretes' endeavor was the *transmission* of *a pre-existing* tradition specifically, an *oral* tradition - of reading. According to the modern paradigm, "[T]he Masoretes were convinced, rightly in their way, that they were keeping up an ancient tradition, and interfering with it purposely would have been for them the worst thing possible" *(ibid.,* 1963, p. 96).11 It is no wonder, then, that the basic attitude shared by most modern Masoretic scholars is that the accentuation system had an actual oral counterpart. In their eyes, the system is essentially musical, and its other functions, such as the logico-syntactic function and the localization of stress, are subordinate (Yeivin, 1973, p.178; Breuer, 1982, pp. 3-9; Medan, 1965, p.395).

1.10 **Thus, conflicting conclusions emerge from the two parallel** fields of academic study that concern themselves with the two complementary aspects of the *te'amim:* actual performance, and their rules of occurrence in the written material. To find a practical solution to the resulting dilemma is no simple task for serious methodological reasons.

1.11 **One might attempt to "reconcile" the obvious diversities in present practice in order to fashion a more uniform** correspondence with the written signs. Such an attempt was made in the early 1900s by A.Z. Idelsohn. Performing a pioneering comparative analysis of different performances from an extensive range of traditions, and in particular through comparative tables of motives, Idelsohn suggested several basic common patterns genuinely shared by all performance traditions. Essentially, these concerned the underlying modes and structures of the melodic motives by which the various accents are articulated; these, he believed, could be traced to the pre-exilic period (Idelsohn, 1922, Vol. 1, pp. 18-23; 1924, pp. 95-117; 1929, pp. 35-71). Modern musicologists were quite critical of his analysis and conclusions (Herzog, 1972, p.1108; Shiloah, 1981, pp. 122-123; 1986, Vol. 1, pp. 21, 31-33, 1992, p.108; Avenary 1976, p.75).

1.12 The basic methodological problem associated with Idelsohn's approach in the context of our discussion can be stated as follows: Assuming that a specific Masoretic musical performance did exist, there is strong reason to expect that only some of the present performance traditions are derived from it; we have no way of knowing which. Moreover, these hypothetical descendants of the "Ur-Masoretic" performance would probably have undergone complex evolutionary phases, each in its own way, with different possible factors of evolution - degeneration or systematic internal development within a given tradition, cross-exchanges between parallel traditions, acculturation to the surrounding environment, and so on. These evolutionary processes are so non-deterministic, and contain so many variables, that any attempt to work backwards from any given modern practice to earlier phases seems altogether hopeless.

1.13 Alternatively, one may focus on the written material in an attempt to decipher the system **of signs a** *priori,* ignoring the present practice. Several such attempts have been made in the past few centuries, the best-known in recent years being that of Mrs. Haik-Vantoura. Using the names and shapes of the graphemes as her point of departure, she produced a deciphering key composed essentially of scale-tone values for the infra-li near signs, and various ornamental values relative to them for the supra-linear ones. Her main argument in defense of the result was that the application of this key invariably yielded aesthetic results (Haik-Vantoura, 1978). On these terms, scholars

in the field were highly critical. Not only was the invoked notion of "musicality" overly subjective and uncertain, but her results clashed too violently with what one was entitled to expect from a putative realization of the *te'amim,* both within the specific context of the observed practices and in the larger context of the modern understanding of Oriental oral musical traditions and their notational systems (e.g. Ringer, 1981).

1.14 A major methodological problem inherent to this a *priori* **kind of reconstruction, exemplified** by Haik-Vantoura's attempts, irrespective of the outcome, is the danger of equipping oneself with genuine constraints that are too lax. If one ignores both Masoretic grammar and modern practice, the only source of data left - the names and shapes of the graphemes - is too ambiguous to provide any definite clue. As for the invoked constraint of having to obtain "musical" results for all biblical verses, this may be deceiving at first glance, in view of the multiplicity of verses and, hence, of apparent constraints. However, closer observation and alternative trials show that the flaws of such a general notion of "musicality" exceed the evident and aforementioned drawback of subjectivity. The notion is too vague operationally, and too susceptible to after- the-fact *ad hoc* readjustments, to offer any serious basis for the evaluation of any solution proposed.

1.15 **In summary, both types of inquiries** present substantial methodological barriers, those based on the studies of practice, as well as those based on the written *te'amim.* The information on which these inquiries are based is too copious and diffuse on the one hand, and too scanty and speculative on the other. Should one conclude that progress cannot be made and that the riddle of the original performance of the accents will remain forever unsolved? The present study aims to show that an alternative path does exist and provides a definite solution.

II. SPECIFICATION OF THE GOAL

1.16 In general terms, the central aim of this study is to provide a reconstruction of the original performance of the te'amirn with a high degree of accuracy, using a novel approach that we call "deductive". This approach, to be specified below, takes the results of Masoretic accentology as its essential starting point and those of Jewish ethnomusicology as its ultimate end-point, so that neither of the two main bodies of knowledge concerning the te'amim is neglected.

The reconstruction will be explicated for the so-called prose subsystem of the 21 biblical books, in terms of a global musical system of organization as well as detailed melodic formulas for the individual accents.

1.17 Secondary aims, subordinate to the central goal and essentially meant to strengthen its results, are to clarify the structure of the written grammatical sign system, which seems so complicated, as well as to unravel some unifying principles of organization in observed practice, which seems so disparate. The integration of these results will allow us to deal with an important historical question: By whom was the reconstructed performance actually practiced, and when? The ultimate objective is therefore to reach a more organic picture of the te'amim in their written and their performed aspects, and in both their synchronic and diachronic dimensions.

For a review of the main extant Tiberian manuscripts, see Yeivin, 1973, pp.9-27.
For introductions to the Masorah, see Dotan, 1972, pp. 1418-1428;
Breuer, 1976, pp.193-283.
For a discussion of this phenomenon see Harviainen, 1977 pp. 218-228, and ref. therein.
For an introduction to these systems, see Dotan, 1972, pp. 1433- 1447.
For some early illustrations, consider the place of the te'amim in the eleventh-century commentary of Rashi (Shereshevsky, 1971), and the pedagogical homily to the *te'amim* composed by his grandson, Rabbenu Tam (Weinfeld, 1972, pp. 43-59).
On the parallel situation for vocalization signs, see Morag, 1972; 1963, p.289.
An overview of the multiple traditions of reading is given in Herzog, 1972.
Alternately, one could search for an overriding principle outside the pure musical realm in the "faithfulness to correct phrasing" (Shiloah, 1992, p.103) i.e. in the divisional function of the *te'amim* (see Section
For a historical review, see Dotan 1970
For a review, see Drori, 1988, pp. 153-154 and references therein.
Consequently and very characteristically modern scholars, when discussing the dating of the system, draw a clear distinction between the invention of the written signs and the origin of the oral tradition that these signs are meant to notate. Conventional hypotheses speak of dating the written signs to the sixth or seventh century C.F., although the

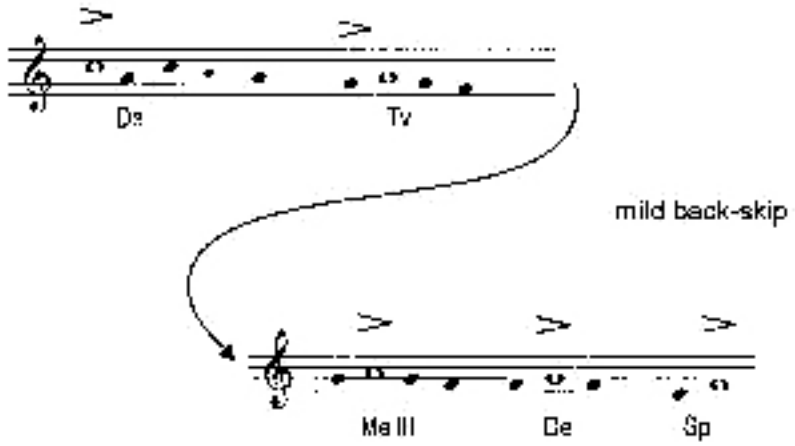
possibility of dating them several centuries earlier is not ruled out Dotan, 1981). As for the origin of the oral tradition, the matter is generally discussed within the broader perspective of the Masorah in its totality: there is earlier evidence in diverse Talmudic sources and the most ancient elements of the transmission are considered to be as old as that of the Bible itself (Alony, 1975 p.232; Dotan 1972, p.1404).

To the best of my knowledge, the first attempt to fashion a partial reconstruction of the performance from the written material appears in Abraham Ben-David Portal eone's *Shiltey Hagiborim* (Mantua, 1612) [see critical edition in Sandlar 1980)]. For additional approaches to the problem, with various degrees of explicitness see review in Sendre 1951, items 2482-2489; 1969, pp. 204-207. He cites' Speidel (1740), Anton (1790), Haupt (1854) [summarized in Mayer, 1855], Arends 1867), Berl (1923), Glaser 1932), and Yasser (1946). See also Flender, 1992, p.38, who refers to Wohlenberg 1967).

THE CHAIN AS A CONCRETE PSYCHO-MUSICAL ENTITY

4.83 A back-view of the implementation of the obtained motivic formulas in the *te'amim* **series of the actual Corpus** allows to confirm a *posteriori* the soundness of the basic claim that the chain constitutes a concrete psycho-musical entity of reference in the performance of the *te 'amim.* The argument goes exactly parallel to that invoked for checking the soundness of the *row* entity, from a cognitive viewpoint, in Appendix ~. Namely, we can probe the plausibility of the claim through a computer analysis performed on the Masoretic Corpus, along the following line. According to the model, the reading of each clause of the Corpus has associated with it, a well-defined series of chain- progressions, that obtained by translating each *ta 'am* (disjunctive or servant) into the specific chain-segment constituting its individual motivic formula, according to the detailed model reached at the outcome of this chapter. An inquiry into the nature of the different chain-progressions, which the reading of the Corpus generates, should provide some indication whether the model is likely to be correct or not. The more dislocated and complex appear, in the mean, these curves, In terms of the chain, the less sound emerges the model; inversely, an observed frequent recurrence of large portions of the chain endows the model with consistency and plausibility.

4.84 **In view of the multiplicity of chain-progressions actually implemented in the Corpus, we provide ourself with the notion of "principal chain-progression"** which has the virtue to **highlight the heart** of the phenomenon at stake. A principal chain-progression is extracted from a chain-progression realizing a given clause, by sifting away the mild back-skips which might be present in it. A mild back-skip, we recall (Secfiofl 3.104) involves a backward jump along the chain caused by the hearing of chain-segrnent which does not occasion a change in the structural tone just heard. For instance:



The realization of *merka' III* gives rise to a back-skip in the chain-progression, but it is a mild one, by definition, since it has same structural tone as previously heard *tevir.*

We concentrate therefore on the quantity N, measuring the number of occurrences of genuine back-skips which involve a jump backward both in the chain and in the row.

For instance, the clause Genesis 1,9a yields the following chain-progression:

which after sifting the mild back-skip introduced by *munah III,* yields the principal chain progression of the clause, which exhibits one genuine back-skip linked with the transition from *revi'a* to *'azla':*

Of course, many different chain-progressions are represented by the same principal chain-progression, hence the advantage of this concept, in reducing the dimension of the effective sample to be analyzed. On the other hand, this reduction does not distort the main information to be studied, because the mild back-skips which are deliberately ignored, do not interfere significantly anyhow in the forward flow along the chain. We may perform therefore the statistical analysis on the principal chain-progressions generated by the different clauses of the Masoretic Corpus.

4.85 The obtained result of the **statistcal analysis is quite striking,** especially at the light of what could be expected from a survey of the different series which are allowed to occur, as catalogued in grammars of *te'amim.* One finds in these compendia a high variety of series, with *possibility* of quite complex syntactic structures, since the grammar admits the possibility of fragmentation of a clause into up to 4 or 5 subclauses (132.9, B2.12, 132.13), the possibility of fragmentation of such subclause, in turn, into up to also 4 or 5 sub-subclauses (132.19-22, B2.26-27, 132.31-3), and additional possibilities of subsequent fragmentation of these sub-subclauses (132.37, B2.42, B2.54, B2.62, B2.64, 132.71-72).

However, a totally different picture emerges when one studies the *relative frequency of occurrence* of the different series in actual performance of the Corpus.

Table 4.16 gives the observed relative distribution of clauses whose principal chain-progression involves no genuine backskip (N = 0), one genuine backskip (N = 1), etc.... (One may view alternatively the quantity N + 1 as the number of fragmented chain-segments present in the principal chain-progression.)

FIG 4.16 (TABLE)

The striking feature in Table 4.16 is the extremely small amount of clauses with *any* substantial number of genuine back-skips at all. The figures indicate that, in the course of reading a typical portion of the Corpus, one must wait on average for 9 clauses, before reaching a clause with more than one genuine back-skip. Clauses involving more than two genuine back-skips are extremely rare.

4.85' A **qualitative survey of principal chain progressions exhibiting maximal possibility of fragmentation** seems to indicate that **even** in those cases, the chain-segments which constitute these fragments are for the most sufficiently long to retain the zigzag character of the chain, as in the following example (Gen. 7,21 a):
or in this other example (Deut. 12:21 a):

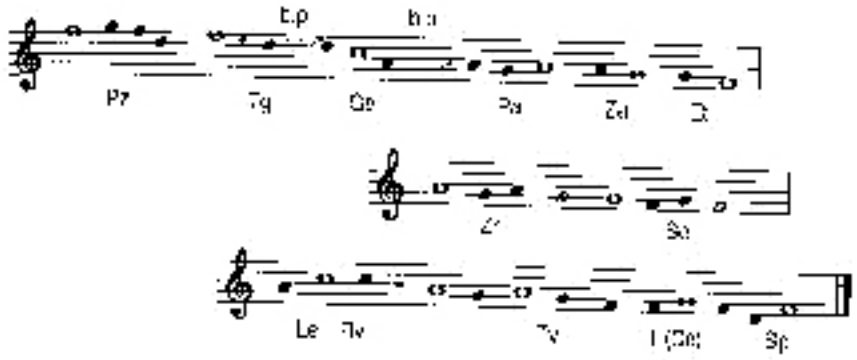
Thus, even in the exceptional progressions, the fragmentation would seldom attain the proportion of a dislocation impairing the entity of the chain. This remains however to be quantitatively checked.

4.86 We may add **that a common Masoretic system of enunciation of the** *te'amini* **turns out to exhibit a** similar property, of propensity for chain integrity, according to the reconstruction..

The singled out list is the following:

Pz, Tg, Ge, Pa, Za, Et, Zr, Le, Rv, Tv, Ti, Sp.

According to the reconstruction, the rendition of this list provides 3 full chain-progressions without back-skips, and if one adjoins *segol* after *zarqa',* as hinted in treatise, all 3 progressions terminate on the structural tone of the Finalis F:



This may explain in fact why this order has been selected, although it presents one definite anomaly, from a pure grammatical point of view: that zaqef immediately precedes *etnah.* Musically, the obtained rendition is perfectly coherent, as shown. And this might provides a reason why this grammatical anomaly was nevertheless accepted, so as to grammatical some kind of verse performance, since it does not give rise to a *musical* anomaly.

Confirmation by Practice

I. METHOD OF CORROBORATION

A. OBJECTIVE: CORROBORATION OF THE CHAIN SYSTEM

5.1 The findings in the previous chapters lead to one major result: given a specific system of *global* musical organization called "the chain-system," a solution may be devised, within the framework of this system, for the various *detailed* motives of the accents in such a way that the grammatical rules regulating the accents are coherently modeled and satisfactorily explained. One may also prove the uniqueness of this solution within the range of freedom determined by the chain-system.

The chain system itself was not deduced from deeper principles; rather it was postulated from the outset.

Thus far, then, we have no direct proof that the chain-system truly exists. Our structure is therefore "suspended in mid-air," so to speak. To be sure, it is a well-built structure, since the values found for the different motives show many cross consistencies. We would however like to strengthen its foundations by buttressing the principles of the chain system with external support.

5.2 **External corroboration of the model will be achieved by examining Jewish cantillation as it is practiced, thus confirming** the validity of the chain-system concept in the realm of *performance.* We intend to show that the chain-system, a purely theoretical concept thus far, actually underlies a large variety of different reading traditions as they are performed.

Thus we shall attain several aims at once:

a. Our theoretical reconstruction of the Masoretic performance will be confirmed by practice:
   1. at the level of the *global* musical framework of this performance, since the essence of this framework is found to be shared by many practices; and
   2. at the level of *detailed* components, i.e., those of the individual accents on the basis of the proof of uniqueness, which is powerful enough to corroborate (albeit indirectly) the motivic reconstruction as practiced on the sole basis of the global features of the practices.

b. Major and diverse traditions of practice, from East and West, will be integrated into a *common* underlying system of musical organization, even though they appear to be widely disparate.

B. SPLITTING THE TASK: IDENTIFICATION OF THE CHAIN BY COMPONENTS

In the context of previous studies on practice of *te'amim* (see Sections 1.4-5; 1.1142), our specific aim that of confirming the reality of the chain system - dictates its own approaches to the performance of the *te'amim.* This is true both for the nature of the material analyzed and for the types of analysis performed on it.

5.3 **The typology of the material is adapted to the global nature of the chain system** in two respects:

a. We refrain from using the conventional so-called *zarqa'* tables, which focus excessively on local small units by spelling out each accent as a disconnected entity. Instead, we rely on continuous readings of complete verses.

b. We do not confine ourselves to a narrow range of performances, which differ only in variants that are of little significance on the global level with which we are concerned. Instead, we subject a wide variety of Jewish traditions of cantillation to the same kind of analysis.

5.4 The types of analysis performed are especially suited to the aim, since they focus on the sole objective of unraveling the chain-system in practice. To attain this objective, we find it convenient to avail ourselves of the intermediate concept of "chain-contour." A chain-contour is a melodic curve which, if the specific modal substrate is disregarded, has the same schematic contour - a descending zigzag line - as that of the chain.

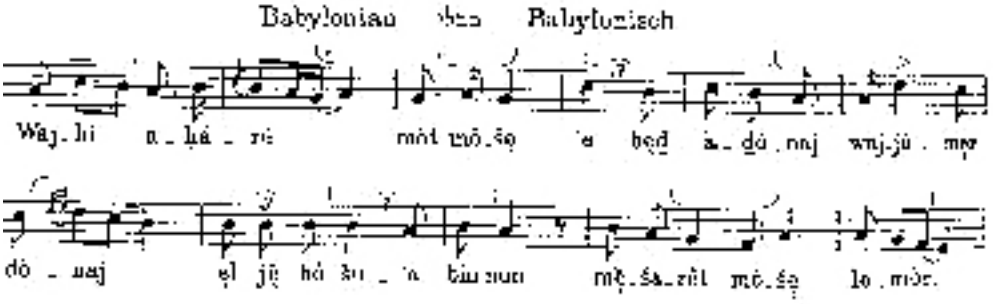
Each tone of the selection that belongs to a chain-segment is notated with a breve under the corresponding tone of the top chain-contour. All successive breve tones belonging to the same chain-segment are recorded on the same staff.

Transitional tones within the chain contour are marked as unstemmed black notes. 15

Tones belonging to the original melody that are found to be extraneous to the chain-contour analysis are marked as stemmed black notes.

A new segment that proceeds from the preceding one through a backward skip within the chain-contour is recorded on the next staff line. A curved arrow connecting the two staffs emphasizes compliance with the basic rule of chain-contour progression. An occasional forward skip along the chain-contour ("chain-break") is signaled by a broken arrow crossed by a slash (----/---->). Finally, a bypass within the chain-contour (i.e., a progression in which one tone of the chain-contour is skipped with no interruption of the sequence of successive melodic seconds) is indicated by a broken arrow (---->).

Example 5.0a

The Original Notation of the Selection

5.10 **The analysis by** segment-matching is illustrated in **Fig. 5.Oc** for the same selection. Each chain segment of the selection performed is represented as a line segment recorded in the same position as the corresponding segment in the top chain contour.

5.11 These manners of presentation elucidate two points, at least *qualitatively,* about the features of the selected piece:

a. the extent to which its melodic material is derived from the top chain-contour;
b. the extent to which the progression of the melody from one chain-contour segment to the next complies with the rules of chain contour progression. The qualitative analysis of degree of conformity to the chain contour system is completed by consideration of quantitative indicators connected with both features.

5.12 **The quantitative criteria that determine compliance with the** rules of chain-contour progression are straightforward: **A.**

a. the relative frequency of forward skips in the chain-contour 5.14 (chain-breaks);
b. the relative frequency of chain-contour bypasses.

5.12' Several additional quantitative indicators are combined in order to measure the significance of the qualitative conformity found to exist:

a. the total span of the chain contour (i.e., that obtained when all chain components found in the selection are adjoined), expressed in number of tones;
b. the number of extraneous tones as a proportion of the total number of tones;
c. the average length of the chain-segment, i.e., the number of tones in the selection that belong to individual chain-segments, divided by the number of segments.

5.13 **The** second stage, that of corroborating the modal system of the chain, i.e., the anhemitonic pentatonic modal system, will be realized by shifting from standard modal analysis of the melodic performances to that of the objects found, in the first stage of corroboration, to underlie the organization of the melodic material of the selections: the chain-contours. The modal analysis of the chain-contours is itself divided into successive analyses on various levels, each deeper than that preceding it:

a. the immediate melodic level of the individual chain-contours;
b. the semi-structural level of the individual chain-contours. This level is reached by focusing on the structural descending series that support the individual contours. These are equivalent or similar to the row in the chain-system (as is discussed in detail below);
c. the structural level of the global family of chain-contours. We reach this level by analyzing the collective distribution of the various modes obtained at the previous level.

II. PRESENTATION OF THE RESULTS
THE SELECTED PRACTICES

The selected performance practices are affiliated with nine different Jewish communities (Ashkenazi, Babylonian, Syrian, Egypt-Palestine, Sephardi [London], Oriental Sephardi, Kurdistani, Moroccan, Yemenite). They concern the cantillations of seven different sections of the Bible, conventionally associated with different "genres" (Torah, Prophets-Haftara, Ruth, Esther, Song of Songs, Daniel, Psalms). Examples of cantillation of Mishna and Talmud are analyzed as well.

In the principal group of selections, the pieces (20 in all) differ from each other at least by community or genre. A complementary analysis embraces other selections of community and/or genre that are represented in the principal group.

Most of the selections analyzed belong to the standard repertoire of notated practice (essentially Idelsohn and Baer); the others appear in modern editions of ancient material (Avenary, Adler) or are drawn from contemporary transcriptions (Herzog, Sharvit, Braun, Spiegel).

5.15 **The principal group of** selections is listed in the Table 5.0.

Table 5.0: The principal group of selected reading traditions

Text Community of attribution Source
Torah Ashkenazj
Th., II, 41, 14
1. Torah Ashkenazi
Baer (1877), No.1112
2. Torah Sephardi (Egypt-Palestine)
Th., 11, 39, 11
3. Torah Sephardi (London)
Th., II, 38, 10
4. Torah Yemenite
Th., I, 101,202
5. Haftara Babylonian
Herzog coll.
6. Haftara Syrian
Th., II, 48, 6

7. Haftara Gibraltar
Th., v, 104, 275
8. Haftara Ashkenazi
Baer (1877), No. 112
9. Esther Morocco
Th., II, 60, 4b
10. Esther Sephardi (Egypt-Palestine)
Th., 11,61, 6
11. Ruth Morocco
Th., II, 58, 5
12. Ruth Sephardi (Egypt Palestine)
Th., II, 59, 7
13. song of Songs Syrian
Th., II, 55, 6
14. Daniel Oriental Sephardi
ldelsohn (1924), p.206
15. Psalms Oriental Sephardi
Th., Iv, 171, 145
16. Psalms Ashkenazi
Th., II, 68, 8.2
17. Mishna Morocco
Spiegel (1990), vol.11, No.10
18. Mishna Kurdistan
Ibid., No.23
19. Talmud Ashkenazi
ldelsohn (1929), p.189, No. 17
20. Biblical verses Obadiah the Proselyte
Adler (1969), p. 401
21. Liber Usualis Liturgy
Desclee (1963), p.59, No.2

III. IMPLICATIONS ABOUT THE HISTORICAL ORIGINS OF THE RECONSTRUCTED PERFORMANCE

6.19 From the study of practice, we have reached the conclusion that the chain-system preexisted the Roman Exile, as an underlying general system of musical organization for different traditions of *te'amim* reading (Section 6.16). Can we reach a similar chronological conclusion for the Masoretic performance practice itself? The questions of the historical origins of the Tiberian Masorah, of its antiquity and relative place among other traditions, have been much debated by modern scholars, particularly with respect to their orthography and vocalization

38 This general claim might ultimately receive additional Support from such parallel Systems as the Babylonian and Palestinian ones (Section 1.3). *Prima facie,* these Systems belong also to the chain system family, in view of the fact that they share with it, in the main, three major characteristic properties: Syntactic function, leader/suspense distinction, and motivic crystallization. But a definite conclusion requires of course additional serious studies.

aspects. Here we wish to show that, with respect to the *te'amim* system, the very properties of its reconstructed per allow us to draw some intrinsic conclusions. formance,

6.20 That the general system of organization of the Tiberian Masoretic performance did exist prior to the Destruction of the Second Temple, may be inferred from the fact that this performance has been shown to fulfill the principles of the chain-system in a very pure form and that the chain-system, itself, has been antedated to a preexilic period (Section 6.16). Yet, this is still far from providing a complete answer to our historical inquiry, since the possibility remains that the reconstructed Tiberian performance is a relatively late post-exilic implementation of this general system of musical organization. Given that the chain system existed at the time of the Destruction of the Temple, and that the Masoretic performance, as noted down, perhaps half a millennium and certainly less than a millennium later, is a particular implementation of this system, it follows that the elements of evolution of this performance over this time span, if there were any, must have been restricted to remain within the limits of the chain system itself. In more precise structuralist terms, the post-exilic evolution of the Masoretic performance must have complied with the *generative* laws of growth of the chain-system. Let us therefore examine the elements of the performance which fall under this heading.

6.21 The main constituent elements of the reconstructed performance, which exhibit a "developed" character with respect to the basic generative chain-system, can be pinpointed as the following four:

a. the row system, underlying the chain-system, together with its particular use for conveying the syntax;
b. the chain system, as a complementary means for conveying the syntax;
c. the saturation of the chain-system at the octave;
d. the specific breakdown of the chain into various chain-segments defining the motives.

The question is therefore whether one can provide some chronological "hold" on these four constituent elements.

6.22 **Dating the row system determines to a large extent the dating** of the three other constituent elements, and therefore of the total performance. This is because, the enforcement of the row- system within the generative chain-system, imposes great restrictions on the other three:

- with respect to element b., the rule included in a. that the the row system prohibits a back-skip in the formation of a syntactic pair, when transposed at chain-level, triggers a major contribution of the chain to the marking of pair formation;
- with respect to element c., the rule included in a. that the syntactic function of the row saturates at the octave, imposes to a great extent saturation at chain-level; - with respect to element d., the rule included in a. that assigns a structural tone for each *ta'am* in accordance with its syntactic function, fixes to a significant extent the location of the chain-segment of the corresponding motive along the chain.

Thus, our historical enquiry reduces to the crucial question: Could it be that the row system is a relatively recent post-exilic offspring of the general chain-system?

6.23 The implementation of the row-system, we argue, requires very particular historical conditions.

a. In the bulk of our work, much effort has been invested in demonstrating the *psycho-musical soundness* of the row system. We have shown that the structural tones have a well-defined meaning because they are restricted to key positions in the motives. We have shown that the induced sequences of structural tones are of limited simple types, so that the row can be a genuine concrete sequence of reference. We have shown that the mechanism of structural hearing generating the pairs has well-recognized precedents in known musical systems.
b. Yet, we must concede that not every *con text of performer* provides to the same extent, a plausible ground for implementing the proposed mechanism. No doubt, the row-system in connection with its syntactic function presupposes *high musical sensitivity,* and more concretely, *intensive musical training.* The functions at stake, of identification of the structural tone, pair formation, representation in a more encompassing pair, long-range memorization, etc. are far too complex, in their totality, to be reasonably expected to be found in an environment devoid of intensive musical activity. This is especially conspicuous, If OflC deals not only with a proper decoding of the correct syntactic structure solely by hearing, but also with a proper *encoding* of the syntactic message, through an row system, which is the object of the present historical discussion.
c. One additional point can be made. There is no doubt that the implementation of the row system, as conveying the syntactic message, is more plausible, in an *instrumental context.* The required analytical functions of structural hearing, enumerated in a., can be more effectively learned through instrumental practice. In particular, instrumental use, parallel to voice reading, would have allowed for a concrete emphasis of the structural tone of the chanted motive, thus providing a materialization for the primary Schenkerian line of the verse unit.46 Thus, the two levels of performance, chain level and row level, could have been split between voice and instrument.47 True, we barely have any testimony of systematic biblical chant along with instrument, but we are dealing here with the conditions for *generating* the correct verse reading, and for its preliminary *training,* not for its traditional form of transmission and practice. We may therefore state that the initial implementation of the row system in verse reading, if not its correct subsequent perception, presupposes outstanding musical training, involving most probably instrumental practice.
This statement allows us to reach two conclusions, presented respectively in Section 6.24, and 6.27.

6.24 The possibility that the row system might have been a post- Second Temple development is excluded, by the prerequisites it has just been shown to involve, in Section 6.23. This is because musical practice underwent, in the period at stake, a phase of recession, of voluntary *self-restraint* in Jewish *halakah* (law), as parsing of the verse is achieved, is completely ignored (WII, p. 29; Dotan, 1970, pp.7-8). In terms of the reconstruction, this paradox has as a counterpart that, although the Masoretes are transmitters of a musical performance, carrying a syntactic message imbedded within its structural skeleton, they do not deal with the structural level of the performance, but rather with the superficial motivic level.

Here again, on the basis of our preceding claims (Sections 6.23- 24), that the row system has been encoded much earlier than the Geonic period, and is accessible only to sophisticated ears, this finds a coherent explanation:

The row-system, although probably correctly transmitted as part of the traditional oral performance, is actually *not perceived* as such by these Masoretes, simply because they did not have the *musical training,* necessary to grasp the hierarchy of groupings by hearing only (Section 6.23). Their faithfulness in their Transmission of the performance need not be cast into doubt, nor their incentive to describe all phenomenological aspects of the performance. Their silence on the syntactic function57 results precisely from the fact that the structural aspect of the musical rendering, i.e. the series of structural tones linked through the

row-system and the generations of hierarchical pairings in their terms, was foreign to their ear.

6.26 We may therefore conclude that the Masoretic performance of the te'amim, **as a whole, was already in existence before** the Roman Exile: Both the chain-system and the row-system, for entirely different reasons (Sections 6.16 and 6.24-25), have been dated to this period, and, once the chain-system and the row system are fixed, the margins of variation of the performance are severely limited (Section 6 22) besides minor possible shifts of the respective chain segments defining the motive this concerns rhythmic features, most of which have not been

addressed in the present reconstruction S9. Thus, except perhaps for marginal details of that kind, in the exact motivic realization the obtained reconstruction corresponds to a tradition of biblical reading, which can be dated from a period preceding the Destruction of the Second Temple.

6.27 The second conclusion, of synchronic nature, pertains to the locus of development of the performance, prior to the Roman Exile. In Section 6.23, we showed that several features of the reconstruction, and in particular, the row system, as implemented in the verse reading, presuppose a high degree of general musical training, involving most probably instrumental practice.

Whereas for the period following the Roman Exile, we had difficulty, on the basis of the Jewish sources, in pointing to the existence of an adequate body fulfilling these properties (Section 6.24), with respect to the pre-exilic period, these sources bring to the forefront a conspicuous candidate: the Levites.

During the period of the functioning of the Temple, the Levites constituted precisely that sector of the Jewish people, which, according to numerous sources, was involved in *musical practice,* as an *official duty.* This duty includes both vocal and instrumental practice, function of the Levites, to periodically assume over the course of more than twenty years of their life the essential musical aspects of the Temple service. If we may judge from other components of this service, such as the halakot pertaining to the Temple's set-up, to sacrifices, and to purification, which are much better documented, this musical function should have involved a high degree of precision, complexity and subtlety. Nowhere else, at the Jewish national scale, do we find such a fitting background of musical skill, to which to attribute the encoding and proper transmission of the reconstructed system of te'amim performance, than among the Levites.

b. Moreover, the traditional task of the Levites, as it emerges from biblical sources, is not limited to musical formal realms It pertains also to aidactive functions. This qualification is of high relevance, because the task of correctly generating and performing the te 'am im series not just a matter of musical skill. Obviously, the parsing of the verse in hierarchical syntactic units, as conveyed by the perform ance, may have substantial bearing upon its meaning. It involves therefore a definite intervention in the semanttc content of the biblical reading and not just in its form, which is not conceivable without some adequate authority.

c. Thus, the Levites exhibit a unique combination of qualifications which, on the basis of the preceding chain of arguments enables' us to attribute to them the fostering of the te'amim performance tradition, within the circle of the Temple.

From this tradition fostered by the Levites, of exceptional precision, sophistication and abstract beauty, stemmed the written version transmitted by the Masoretes, whose original performance has been reconstructed here. A precious heritage of the Jewish people has thus come back to life, pending its original and ultimate implementation *himherah beyameynu, amen.*

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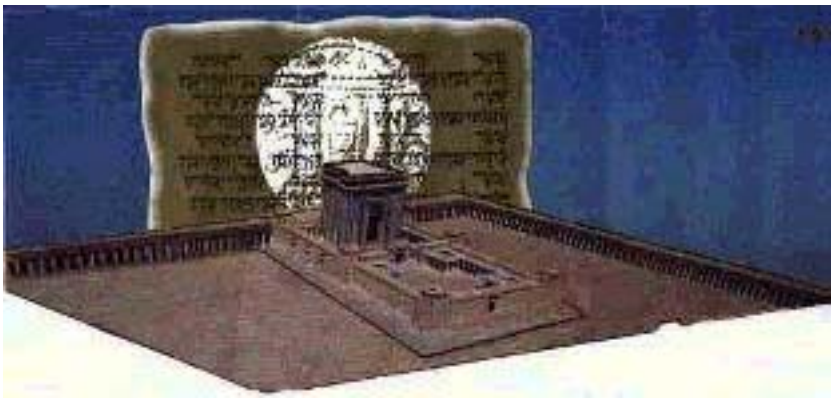
The Levite Academy

BEIT HALEVI: THE LEVITE ACADEMY



In ancient times the Levites played a seminal role in the life of the Jewish People both as custodians of ancestral traditions and as participants in the Temple worship. They served in several major capacities: Educators of the Scriptures in their formal and hermeneutic aspects; Guardians of the Temple Sanctity as well as of Its Purity; and, last but not least, Performers of the Temple Musical Service, vocal and instrumental. Morning and evening, the walls of the Temple Courtyard resounded with the perfectly rendered melodies of the Levites Chorus, an inherent part of all public sacrifices. In fact, the Levites are the only group for whom Scripture dictates a prescribed period of training in order to qualify for service: a five year program.

Today, we have no Temple and the Levitical traditions have been all but forgotten. And whereas in recent times there has been a renaissance of priestly studies, Levitical studies have remained totally neglected. This situation is regrettable on a number of grounds: Jews pray for the speedy rebuilding of the Temple, and preparation for Temple service lends credence to our state of expectancy. This is especially true for Levites the world over, who currently lack a meaningful way of giving expression to their unique status.

There is a further element which gives immediacy to the idea of Levitical studies. A central portion of Levitical studies involved complex musical training so that the authentic musical service could be performed in the Temple. This training was also a prerequisite for the proper transmission by the Levites of the authoritative chant of the Bible. Only in contemporary times has there developed a breakthrough by which this lost wondrous musical tradition can be reconstructed.

One remarkable feature of this tradition is the economy of means used to achieve its unique function of parsing (clarifying the syntax) of the biblical text through music. The entire musical corpus, in its multiplicity and complexity of forms, turns out to be nothing but a variation on a single theme. This theme, called the "chain", is itself elegant in its simplicity of design. It is this essential simplicity which makes it possible for the listener to readily grasp the textual syntax, by means of structural hearing: the system exploits the propensity of the musical ear to perceive the underlying architecture of the melody.

Now that these melodies of exceptional precision, sophistication and abstract beauty have come back to life, one may fully appreciate why "it was so hard for Moshe Rabbenu to teach the Levites their song" (Ber. Rab. 54:4). In fact, the scope of the musical curriculum of the Levites had to far exceed that of a Cantorial School only concerned with voice quality and repertoire. To practice his art, the student Levite also needed to develop expertise in structural musical hearing through complex exercises of ear training and instrumental practice, to a degree of subtlety achieved today only by the most professional musicians.

It is with this in mind that the Levite Academy is being inaugurated in Jerusalem as part of the Jerusalem 3000 festivities; a tangible expression of Jerusalem's centrality and a link to its glorious heritage from Temple times. The Levite Academy is to serve as a catalyst and a repository of Levitical studies initially for local scholars and eventually for Levites the world over. Today you may become a founding supporter of the Levite Academy.

In terms of Halachic material alone, there are over eighty legal rubrics which pertain specifically to Levites, such as the Laws of Musical Worship, the Laws of Temple Guardianship, the Laws of the Tithe, of Levitic Lineage, etc. Many of these involve practicalities and Talmudic topics which are seldom studied in Yeshivahs. For instance, the Gaon of Vilna's request that music be part of Torah curriculum was an exception in the Yeshivah world ; a concrete knowledge of Guardianship Laws presupposes a precise understanding of the architecture no less than the halachic intricacies of the location of the Temple, matters until now addressed only by select experts.

All of this knowledge must be organized pedagogically, in close cooperation with appropriate halachic and academic bodies, so that a defined course of study is developed that can be applied in a variety of educational frameworks. Once the feedback from a six-month pilot course is assimilated, regular on-going courses will be scheduled for Jerusalemites. Correspondence courses (ideally, through computer linkup), complemented by a series of intensive seminars taking place in Jerusalem, will be inaugurated in year two.

The establishment of the Levite Academy promises to make a major contribution to reviving Levite studies, revivifying an entire branch of Torah study. It can also capture the public imagination, particularly with regard to the resurrection of this ancient musical tradition. The musical world, especially, will attain a deeper understanding of the relationship between the Music of Ancient Israel and early Western Music. It is an idea whose time has come.